International Journal of Engineering Science

List of Contents and Author Index
Volume 41, 2003

PERGAMON

INTERNATIONAL JOURNAL OF ENGINEERING SCIENCE

Incorporating: *Letters in Applied and Engineering Sciences*

Board of Editors

Editor-in-Chief: Dr A. CEMAL ERINGEN, *International Journal of Engineering Science,*
15 Red Tail Drive, Littleton, CO 80126-5001, U.S.A.

Assistant to the Editor: MEVA ERINGEN

Associate Editor

Professor E. S. ŞUHUBİ, Yeditepe University, Department of Mathematics, Faculty of Arts and Science,
26 Augustos Yerlesimi, Kayisdagi Caddesi 81120, Kayisdagi, Erenkoy, Istanbul, Turkey

Dr S.-A. ZHOU, Langsjohojden 45, S-125 51
Alvsjo-Stockholm, Sweden

Dr. M.N.L. Narasimhan, 10455 S.W.
152nd Avenue, Beaverton, OR 97007, USA

Editorial Advisory Board

G. AHMADI, *Potsdam, NY*
S. A. BERGER, *Berkeley, CA*
B. A. BILBY, *Sheffield*
J. CASEY, *Berkeley, CA*
T. CHANG, *Cambridge, MA*
L. DEBNATH, *Edinburg, TX*
H. DEMIRAY, *Turkey*
P. DURBIN, *Stanford, CA*
J. D. GODDARD, *La Jolla, CA*
J. HUTCHINSON, *Cambridge, MA*
D. IESAN, *Romania*
K. T. JACOB, *Bangalore*
A. D. KIRWAN, *Newark, DE*
J. LEE, *Washington, DC*
G. LUKASZEWICZ, *Warsaw*
N. V. MADHUSUDANA, *Bangalore*
S. MINAGAWA, *Japan*
T. MURA, *Evanston, IL*
M. N. L. NARASIMHAN, *Tigard, OR*
J. T. ODEN, *Austin, TX*
R. W. OGDEN, *Glasgow*
Z. OLESIAK, *Warsaw*
K. R. RAJAGOPAL, *College Station, TX*
A. ROMANO, *Naples*
G. F. SMITH, *PA*
I. STAKGOLD, *DE*
C. WEI-ZANG, *China*

Publishing office: Elsevier Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK [Tel.: (+44) 1865-843000; fax: (+44) 1865-843010].

Advertising information: Advertising orders and enquiries can be sent to: **USA, Canada and South America:** Mr Tino DeCarlo, The Advertising Department, Elsevier Inc., 360 Park Avenue South, New York, NY 10010-1710, USA; phone: (+1) (212) 633 3815; fax: (+1) (212) 633 3820; e-mail: t.decarlo@elsevier.com. **Japan:** The Advertising Department, Elsevier K.K., 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: jp.info@elsevier.com. **Europe and ROW:** Commercial Sales Department, Elsevier Ltd., The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK; phone: (+44) 1865 843016; fax: (+44) 1865 843976; e-mail: media@elsevier.com

Author enquiries: For enquiries relating to the submission of articles (including electronic submission where available) please visit Elsevier's Author Gateway at http://authors.elsevier.com. The Author Gateway also provides the facility to track accepted articles and set up e-mail alerts to inform you of when an article's status has changed, as well as detailed artwork guidelines, copyright information, frequently asked questions and more.

Contact details for questions arising after acceptance of an article, especially those relating to proofs, are provided after registration of an article for publication.

Publication information: *International Journal of Engineering Science* (ISSN 0020-7225). For 2003, volume 41 is scheduled for publication. Subscription prices are available upon request from the Publisher or from the Regional Sales Office nearest you or from this journal's website (http://www.elsevier.com/locate/ijengsci). Further information is available on this journal and other Elsevier products through Elsevier's website (http://www.elsevier.com). Subscriptions are accepted on a prepaid basis only and are entered on a calendar year basis. Issues are sent by standard mail (surface within Europe, air delivery outside Europe). Priority rates are available upon request. Claims for missing issues should be made within six months of the date of dispatch.

Orders, claims, and journal enquiries: please contact the Customer Service Department at the Regional Sales Office nearest you:
Orlando: Elsevier, Customer Service Department, 6277 Sea Harbor Drive, Orlando, FL 32887-4800, USA; phone: (+1) (877) 8397126 [toll free number for US customers], or (+1) (407) 3454020 [customers outside US]; fax: (+1) (407) 3631354; e-mail: usjcs@elsevier.com
Amsterdam: Elsevier, Customer Service Department, P.O. Box 211, 1000 AE Amsterdam, The Netherlands; phone: (+31) (20) 4853757; fax: (+31) (20) 4853432; e-mail: nlinfo-f@elsevier.com
Tokyo: Elsevier, Customer Service Department, 4F Higashi-Azabu, 1-Chome Bldg, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106-0044, Japan; phone: (+81) (3) 5561 5037; fax: (+81) (3) 5561 5047; e-mail: jp.info@elsevier.com
Singapore: Elsevier, Customer Service Department, 3 Killiney Road, #08-01 Winsland House I, Singapore 239519; phone: (+65) 6349 0222; fax: (+65) 6733 1510; e-mail: asiainfo@elsevier.com

Back issues of all previously published volumes are available direct from Elsevier Offices (Oxford and New York). Complete volumes and single issues can be purchased for 1998–2002. Earlier issues are available in high quality photo-duplicated copies as complete volumes only. Back volumes on microfilm are available from UMI, 300 North Zeeb Road, Ann Arbor, MI 48106, USA.

© 2003 Elsevier Ltd. All rights Reserved.

USA mailing notice: *International Journal of Engineering Science* (ISSN 0020-7225) is published monthly with additional issues in January, February, March, May, July, August, September and November by Elsevier Ltd. (P.O. Box 211, 1000 AE Amsterdam, The Netherlands). Annual subscription price in the USA US$ 3338 (valid in North, Central and South America), including air speed delivery. Periodical postage rate paid at Jamaica, NY 11431.

USA POSTMASTER: Send address changes to *International Journal of Engineering Science*, Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

AIRFREIGHT AND MAILING in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003.

List of Contents

NUMBER 1

M. Kamiński	1	Homogenization of transient heat transfer problems for some composite materials
A.G. Ramm and **A. Galstian**	31	On deconvolution methods
A.F. Khorrami	45	Upstream influence in hypersonic aerodynamics over sharp thin and thick bodies
Y. Chen, J.D. Lee and **A. Eskandarian**	61	Examining the physical foundation of continuum theories from the viewpoint of phonon dispersion relation
X. Wang and **Y.-p. Shen**	85	Inclusions of arbitrary shape in magnetoelectroelastic composite materials

NUMBER 2

M.H. Chang, C.-K. Chen and **H.C. Weng**	103	Stability of ferrofluid flow between concentric rotating cylinders with an axial magnetic field
R. Bhargava, L. Kumar and **H.S. Takhar**	123	Numerical solution of free convection MHD micropolar fluid flow between two parallel porous vertical plates
Z.M. Xiao, Y. Dai and **B.J. Chen**	137	Micro-crack initiation at tip of a rigid line inhomogeneity in piezoelectric materials
D.A. Prikazchikov and **G.A. Rogerson**	149	Some comments on the dynamic properties of anisotropic and strongly anisotropic pre-stressed elastic solids
Y.Y. Lok, P. Phang, N. Amin and **I. Pop**	173	Unsteady boundary layer flow of a micropolar fluid near the forward stagnation point of a plane surface
S. De Cicco	187	Stress concentration effects in microstretch elastic bodies
P. Daripa and **R.K. Dash**	201	A class of model equations for bi-directional propagation of capillary–gravity waves
W. Gao, C. Glorieux and **J. Thoen**	219	Laser ultrasonic study of Lamb waves: determination of the thickness and velocities of a thin plate
	229	Book review

doi:10.1016/S0020-7225(03)00325-2

NUMBERS 3–5

Special Issue
THE ERINGEN ANNIVERSARY ISSUE

	ix	Preface
	xi	Dedication
	xv	Publications of Professor A. Cemal Eringen
M.N.L. Narasimhan	231	A mathematical model of pulsatile flows of microstretch fluids in circular tubes
A.D. Kirwan Jr., M. Toner and **L. Kantha**	249	Predictability, uncertainty, and hyperbolicity in the ocean
G. Łukaszewicz	259	Asymptotic behavior of micropolar fluid flows
R.S.R. Gorla, S.S. Pai and **J.J. Rusick**	271	Probabilistic study of fluid structure interaction
H. Ramkissoon and **K. Rahaman**	283	Wall effects on a spherical particle
J.F. Ganghoffer	291	New concepts in nonlocal continuum mechanics and new materials obeying a generalised continuum behaviour
J. Peddieson, G.R. Buchanan and **R.P. McNitt**	305	Application of nonlocal continuum models to nanotechnology
S.-A. Zhou	313	On forces in microelectromechanical systems
M. Moroni, J.H. Cushman and **A. Cenedese**	337	A 3D-PTV two-projection study of pre-asymptotic dispersion in porous media which are heterogeneous on the bench scale
T.K. Karalis	371	Integrated effects on the shrinkage stresses from the water loss in soft cohesive soils
J.D. Lee and **Y. Chen**	387	Constitutive relations of micromorphic thermoplasticity
H. Sheibani, Y. Liu, S. Sakai, B. Lent and **S. Dost**	401	The effect of applied magnetic field on the growth mechanisms of liquid phase electroepitaxy
I. Kunin	417	On extracting physical information from mathematical models of chaotic and complex systems

I. Kunin, B. Kunin and **G. Chernykh**	433	Lorenz-type controlled pendulum
B. Yamrom, I. Kunin, R. Metcalfe and **G. Chernykh**	449	Discrete systems of controlled pendulum type
I. Kunin, F. Hussain and **X. Zhou**	459	On multiple routes to chaos in advection induced by point vortices
B. Yamrom, I.A. Kunin and **G.A. Chernykh**	465	Centroidal trajectories and frames for chaotic dynamical systems
B. Yamrom, I.A. Kunin and **G.A. Chernykh**	475	Method of algorithmic transformations with applications to chaotic systems
V. Kreinovich and **I.A. Kunin**	483	Kolmogorov complexity and chaotic phenomena
S. Preston, I. Kunin, Y.E. Gliklikh and **G. Chernykh**	495	On the geometrical characteristics of chaotic dynamics, I
S. Sidi-Ali-Cherif and **K.M. Grigoriadis**	507	Efficient model reduction of large scale systems using Krylov-subspace iterative methods

NUMBER 6

M. Boukrouche and **G. Łukaszewicz**	521	Asymptotic analysis of solutions of a thin film lubrication problem with Coulomb fluid–solid interface law
S. Govender	539	Oscillatory convection induced by gravity and centrifugal forces in a rotating porous layer distant from the axis of rotation
Th. Koureas, A. Charalambopoulos and **V.K. Kalpakides**	547	Symmetry groups and group-invariant solutions of 3D non-linear thermoelasticity
Q.S. Li	569	Classes of exact solutions for buckling of multi-step non-uniform columns with an arbitrary number of cracks subjected to concentrated and distributed axial loads
J. Awrejcewicz and **V.A. Krysko**	587	Nonlinear coupled problems in dynamics of shells
S. Asghar, S. Parveen, S. Hanif, A.M. Siddiqui and **T. Hayat**	609	Hall effects on the unsteady hydromagnetic flows of an Oldroyd-B fluid
M.A.M. Al Khatib and **S.D.R. Wilson**	621	Flow of Bingham fluids in an orthogonal rheometer
B.L. Wang and **Y.-W. Mai**	633	On the electrical boundary conditions on the crack surfaces in piezoelectric ceramics

NUMBER 7

A.C. Eringen	653	Continuum theory of micromorphic electromagnetic thermoelastic solids
X.-F. Wu, S. Cohn and **Y.A. Dzenis**	667	Screw dislocation interacting with interfacial and interface cracks in piezoelectric bimaterials
Y.-S. Chan, A.C. Fannjiang and **G.H. Paulino**	683	Integral equations with hypersingular kernels—theory and applications to fracture mechanics
A.P.S. Selvadurai	721	On an invariance principle for unilateral contact at a bimaterial elastic interface
L. Bardella	741	An extension of the Secant Method for the homogenization of the nonlinear behavior of composite materials
O.P. Bhutani, K. Singh and **D.K. Kalra**	769	On certain classes of exact solutions of Einstein equations for rotating fields in conventional and nonconventional form
	787	Erratum

NUMBER 8

W. Sadowski	789	Upper bound for the number of degrees of freedom for magneto-micropolar flows and turbulence
F. Bofill and **R. Quintanilla**	801	Anti-plane shear deformations of swelling porous elastic soils
M. Mabrouk and **A. Boughammoura**	817	Homogenization of a strongly heterogeneous periodic elastic medium
D.L. Chopp and **N. Sukumar**	845	Fatigue crack propagation of multiple coplanar cracks with the coupled extended finite element/fast marching method
Y. Chen and **J.D. Lee**	871	Determining material constants in micromorphic theory through phonon dispersion relations
A. Haug, V. Knoblauch and **R.M. McMeeking**	887	Combined isotropic and kinematic hardening in phenomenological switching models for ferroelectric ceramics
C.K. Chan, H.Y. Wang and **H.Y. Tang**	903	Effect of intense turbulence on turbulent premixed V-flame

NUMBER 9

Y.-Q. Zhang, H. Hao and **Y. Lu**	917	Anisotropic dynamic damage and fragmentation of rock materials under explosive loading
D.D. Bhatta and **M. Rahman**	931	On scattering and radiation problem for a cylinder in water of finite depth
C.-F. Gao, H. Kessler and **H. Balke**	969	Crack problems in magnetoelectroelastic solids Part I: exact solution of a crack
C.-F. Gao, H. Kessler and **H. Balke**	983	Crack problems in magnetoelectroelastic solids. Part II: general solution of collinear cracks
M. Ciarletta and **F. Passarella**	995	Some results in the dynamics of porous elastic mixtures
L.J. Sudak	1019	Effect of an interphase layer on the electroelastic stresses within a three-phase elliptic inclusion

NUMBER 10

A.C. Eringen	1041	Incompressible micromorphic fluid model for turbulence
F. Kamişli	1059	Flow analysis of a power-law fluid confined in an extrusion die
N. Ziya Perdahçı and **A. Hacınlıyan**	1085	Normal forms and nonlocal chaotic behavior in Sprott systems
M. Hjiaj, J. Fortin and **G. de Saxcé**	1109	A complete stress update algorithm for the non-associated Drucker–Prager model including treatment of the apex
A. Chakrabarti, D.S. Ahluwalia and **S.R. Manam**	1145	Surface water waves involving a vertical barrier in the presence of an ice-cover

NUMBER 11

İ. Bakırtaş and **N. Antar**	1163	Evolution equations for nonlinear waves in a tapered elastic tube filled with a viscous fluid
T. Hayat, M. Zamurad, S. Asghar and **A.M. Siddiqui**	1177	Magnetohydrodynamic flow due to non-coaxial rotations of a porous oscillating disk and a fluid at infinity
N. Afzal	1197	Momentum transfer on power law stretching plate with free stream pressure gradient
Y.Z. Chen	1209	Various limit processes for evaluating stresses at crack tip and notch crown tip

J.N. Sharma, V. Pathania and **S.K. Gupta** 1219 Thermoelastic Lamb waves in a transversely isotropic plate bordered with layers of inviscid liquid

K.A. Anagnostopoulos, A. Charalambopoulos and **D.I. Fotiadis** 1239 Scattering of electromagnetic spherical waves by a buried spheroidal perfect conductor

P.D. Ariel 1267 Flow of a third grade fluid through a porous flat channel

NUMBER 12

S.K. Kanaun 1287 Dielectric properties of matrix composite materials with high volume concentrations of inclusions (effective field approach)

C.I. Chen, C.K. Chen and **Y.T. Yang** 1313 Weakly nonlinear stability analysis of thin viscoelastic film flowing down on the outer surface of a rotating vertical cylinder

Q. Tu, C. Wu, Q. Li, F. Wu and **F. Guo** 1337 Influence of temperature gradient on acoustic characteristic parameters of stack in TAE

P. Saikrishnan and **S. Roy** 1351 Non-uniform slot injection (suction) into water boundary layers over (i) a cylinder and (ii) a sphere

O. Cazacu and **F. Barlat** 1367 Application of the theory of representation to describe yielding of anisotropic aluminum alloys

H. Demiray 1387 Contributions of higher order terms to nonlinear waves in fluid-filled elastic tubes: strongly dispersive case

X.-F. Li and **G.J. Tang** 1405 Electroelastic analysis of an interface anti-plane shear crack in a layered piezoelectric plate

NUMBERS 13–14

Special Issue
DAMAGE AND FAILURE ANALYSIS OF MATERIALS

vii Preface

M. Haase and **J. Widjajakusuma** 1423 Damage identification based on ridges and maxima lines of the wavelet transform

E. Rizzi and **I. Carol** 1445 Dual orthotropic damage–effect tensors with complementary structures

R. Massabò, L. Brandinelli and **B.N. Cox** 1497 Mode I weight functions for an orthotropic double cantilever beam

G. Zi and **Z.P. Bažant** 1519 Eigenvalue method for computing size effect of cohesive cracks with residual stress, with application to kink-bands in composites

M. Ekh, A. Menzel, K. Runesson and **P. Steinmann** 1535 Anisotropic damage with the MCR effect coupled to plasticity

M. Jirásek and **S. Rolshoven** 1553 Comparison of integral-type nonlocal plasticity models for strain-softening materials

T. Liebe, A. Menzel and **P. Steinmann** 1603 Theory and numerics of geometrically non-linear gradient plasticity

G. Etse, M. Nieto and **P. Steinmann** 1631 A micropolar microplane theory

P. Pivonka, R. Lackner and **H.A. Mang** 1649 Shapes of loading surfaces of concrete models and their influence on the peak load and failure mode in structural analyses

NUMBER 15

M. Ishihara and **N. Noda** 1667 Control of mechanical deformation of a laminate by electrical load to piezoelectric actuator considering the effects of damping and transverse shear

M.F. Natale and **D.A. Tarzia** 1685 Explicit solutions to the one-phase Stefan problem with temperature-dependent thermal conductivity and a convective term

X.-F. Wu, Y.A. Dzenis and **T.-Y. Fan** 1699 Two semi-infinite interfacial cracks between two bonded dissimilar elastic strips

M.-I. Char and **C.-C. Chen** 1711 Effect of a non-uniform temperature gradient on the onset of oscillatory Bénard–Marangoni convection of an electrically conducting liquid in a magnetic field

W.J. Feng and **Z.Z. Zou** 1729 Dynamic stress field for torsional impact of a penny-shaped crack in a transversely isotropic functional graded strip

S. Pranesh 1741 Effects of suction–injection–combination (SIC) on the onset of Rayleigh–Benard magnetoconvection in a micropolar fluid

E. Turska and **K. Wiśniewski** 1767 On semi-infinite crack problems in elastic–plastic bodies; uniqueness and examples

Y.-S. Wang, G.-L. Yu and **J. Qu** 1785 Subsonic slip waves along the interface between two anisotropic elastic half-spaces in sliding contact with separation

J. Wang and **S. Fang** 1799 State space solution of non-axisymmetric Biot consolidation problem for multilayered porous media

NUMBER 16

F. Bofill and **R. Quintanilla** 1815 On the uniqueness and spatial behaviour of anti-plane shear deformations of swelling porous elastic soils backward in time

B.V. Rathish Kumar and **Shalini** 1827 Free convection in a non-Darcian wavy porous enclosure

P.F. Hou, H.M. Wang and **H.J. Ding** 1849 Analytical solution for the axisymmetric plane strain electro-elastic dynamics of a special non-homogeneous piezoelectric hollow cylinder

R. Abid and **R. Habibi** 1869 Analysis of Reynolds stress equations for stratified rotating homogeneous shear flow

Y.W. Liu, C.P. Jiang and **Y.K. Cheung** 1883 A screw dislocation interacting with an interphase layer between a circular inhomogeneity and the matrix

M. Rahman 1899 The axisymmetric contact problem of thermoelasticity in the presence of an internal heat source

R. Valid 1913 On Lagrange–Euler formulations for fluid–structure interactions

H.S. Takhar, A.J. Chamkha and **G. Nath** 1935 Natural convection on a thin vertical cylinder moving in a high-porosity ambient medium

NUMBER 17

T. Kournyts'kyi, S. Matysiak and **R. Terletskii** 1951 Heat and mass transfer in two-layer elastic composite subjected to thermal infrared radiation

C. Rogers, W.K. Schief and **J. Wylie** 1965 Wave propagation in ideally hard inhomogeneous elastic materials associated with pseudospherical surfaces

R. Souchet 1975 Concerning the fictitious continuum in damage mechanics

D. Ieşan and **A. Scalia** 1989 On complex potentials in the theory of microstretch elastic bodies

Z. Qin, L. Librescu, D. Hasanyan and **D.R. Ambur** 2005 Magnetoelastic modeling of circular cylindrical shells immersed in a magnetic field. Part I: Magnetoelastic loads considering finite dimensional effects

Z. Qin, D. Hasanyan, L. Librescu and **D.R. Ambur** 2023 Magnetoelastic modeling of circular cylindrical shells immersed in a magnetic field Part II: Implications of finite dimensional effects on the free vibrations

S.D. Akbarov and **M. Ozisik** 2047 The influence of the third order elastic constants to the generalized Rayleigh wave dispersion in a pre-stressed stratified half-plane

A. Baksi, S. Das and **R.K. Bera** 2063 Impact response of a cracked orthotropic medium-revisited

NUMBER 18

P. Schiavone 2081 Neutrality of the elliptic inhomogeneity in the case of non-uniform loading

M. Ayub, A. Rasheed and **T. Hayat** 2091 Exact flow of a third grade fluid past a porous plate using homotopy analysis method

C.-F. Gao, P. Tong and **T.-Y. Zhang** 2105 Interfacial crack problems in magneto-electroelastic solids

J.P. Jarić 2123 On the decomposition of symmetric tensors into traceless symmetric tensors

X. Wang and **Z. Zhong** 2143 A circular tube or bar of cylindrically anisotropic magneto-electroelastic material under pressuring loading

R. Bhargava, L. Kumar and **H.S. Takhar** 2161 Finite element solution of mixed convection micropolar flow driven by a porous stretching sheet

Z.-W. Cui and **K.-X. Wang** 2179 Influence of the squirt flow on reflection and refraction of elastic waves at a fluid/fluid-saturated poroelastic solid interface

T. Özer 2193 Symmetry group classification for two-dimensional elastodynamics problems in nonlocal elasticity

NUMBER 19

Z.-Q. Feng, F. Peyraut and **N. Labed** 2213 Solution of large deformation contact problems with friction between Blatz–Ko hyperelastic bodies

G. Amendola 2227 On the stability for a rate-type electric conducting medium

S.M. Hasheminejad and **M. Azarpeyvand** 2253 Modal vibrations of an infinite cylinder in an acoustic half-space

S. Ramtani 2273 Saturation boundary condition within the context of the theory of interacting media with a certain distribution of fibers

M.A. Ezzat and **A.S. El-Karamany** 2281 The relaxation effects of the volume properties of viscoelastic material in generalized thermoelasticity

M.J. Jaeger and **U.H. Kurzweg** 2299 Ventilation of enclosed porous media by the application of periodic pressure variations

Ph. Clementz and **J.N. Pernin** 2305 Homogenization modeling of capillary forces in selective laser sintering

NUMBER 20

A.D. Drozdov and **R.K. Gupta** 2335 Non-linear viscoelasticity and viscoplasticity of isotactic polypropylene

S. Chiriţă 2363 On the uniqueness and continuous data dependence of solutions in the theory of swelling porous thermoelastic soils

M. Stolarska and **D.L. Chopp** 2381 Modeling thermal fatigue cracking in integrated circuits by level sets and the extended finite element method

A. Demir and **A. Büyükaksoy** 2411 Transmission of sound waves in a cylindrical duct with an acoustically lined muffler

X. Wang and **Z. Zhong** 2429 A finitely long circular cylindrical shell of piezoelectric/piezomagnetic composite under pressuring and temperature change

M. Ciarletta, G. Iovane and **M.A. Sumbatyan** 2447 On stress analysis for cracks in elastic materials with voids

I List of Contents and Author Index for Volume 41 (2003)